

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (currently amended): A server for establishing communication upon receipt of access from a client terminal through a network, comprising:  
a memory protection unit for protecting data stored in a volatile memory to be protected, in the event of a power failure, wherein said memory protection unit comprises:  
power monitoring means for detecting a power failure supplied to said ~~above~~  
~~protective-memory to be protected~~; and  
switch controlling means for switching ~~a-control of~~, and ~~a power supply toward~~  
~~of~~, said ~~protective-memory to be protected~~;  
wherein when a failure is detected in ~~the~~ a power supplied to said ~~protective-memory to~~  
be protected, ~~the control toward of~~ said memory to be protected is switched to ~~a side of~~ said memory protection unit, and said power supply is switched to a standby power, before data stored in said ~~protective-memory to be protected~~ has some damaging effect is damaged; and  
wherein said server notifies the client of write completion of data at a time when data sent from said client has been written into said memory to be protected.
2. (currently amended): The server as set forth in ~~Claim~~ claim 1, wherein said switch controlling means finishes the switching, returns ~~the control toward of~~ said memory to be

protected to a CPU, and returns said power supply to an ~~ordinal~~ordinary ~~one~~power supply, after ~~solution~~resolution of the power failure.

3. (canceled).

4. (currently amended): ~~The server as set forth in Claim 1,~~ A server for establishing communication upon receipt of access from a client terminal through a network, comprising:  
a memory protection unit for protecting data stored in a volatile memory to be protected,  
in the event of a power failure, wherein said memory protection unit comprises:

power monitoring means for detecting a power failure supplied to said memory to  
be protected; and

switch controlling means for switching control of, and a power supply of, said  
memory to be protected;

wherein when a failure is detected in a power supplied to said memory to be protected,  
control of said memory to be protected is switched to said memory protection unit, and said  
power supply is switched to a standby power, before data stored in said memory to be protected  
is damaged;

~~which~~wherein the server checks whether ~~said a~~last termination is abnormal or normal, at  
~~the a power~~activation;

wherein, when said last termination is abnormal, the server instructs said memory  
protection unit to return said ~~protective~~memory to be protected after memories, other than said

~~protective-memory to be protected~~, are initialized at the activation, ~~when said last termination is abnormal, while; and~~

wherein, when said last termination is normal, the server instructs said memory protection unit to return said ~~protective-memory to be protected~~, and thereafter initializes all the memories at the activation ~~when said last termination is normal~~.

5. (currently amended): ~~The server as set forth in Claim 1,~~ A server for establishing communication upon receipt of access from a client terminal through a network, comprising:

a memory protection unit for protecting data stored in a volatile memory to be protected, in the event of a power failure, wherein said memory protection unit comprises:

power monitoring means for detecting a power failure supplied to said memory to be protected; and

switch controlling means for switching control of, and a power supply of, said memory to be protected;

wherein when a failure is detected in a power supplied to said memory to be protected, control of said memory to be protected is switched to said memory protection unit, and said power supply is switched to a standby power, before data stored in said memory to be protected is damaged; and

wherein said switch controlling means switches said memory to be protected to a low power mode at a time of switching said power supply ~~toward~~ of said memory to the standby power.

6. (currently amended): ~~The server as set forth in Claim 1,~~ A server for establishing communication upon receipt of access from a client terminal through a network, comprising:  
a memory protection unit for protecting data stored in a volatile memory to be protected, in the event of a power failure, wherein said memory protection unit comprises:  
power monitoring means for detecting a power failure supplied to said memory to be protected; and  
switch controlling means for switching control of, and a power supply of, said memory to be protected;  
wherein when a failure is detected in a power supplied to said memory to be protected, control of said memory to be protected is switched to said memory protection unit, and said power supply is switched to a standby power, before data stored in said memory to be protected is damaged; and  
wherein said memory protection unit performs backup processing on ~~the~~ data stored in said memory, in response to a user's operation, after the switching.

7. (currently amended): The server as set forth in ~~Claim~~ claim 1, wherein said ~~protective-memory to be protected~~ is comprises a SDRAM or a DIMM.

8. (currently amended): ~~The server as set forth in Claim 1,~~ A server for establishing communication upon receipt of access from a client terminal through a network, comprising:  
a memory protection unit for protecting data stored in a volatile memory to be protected, in the event of a power failure, wherein said memory protection unit comprises:

power monitoring means for detecting a power failure supplied to said memory to be protected; and  
switch controlling means for switching control of, and a power supply of, said memory to be protected;  
wherein when a failure is detected in a power supplied to said memory to be protected, control of said memory to be protected is switched to said memory protection unit, and said power supply is switched to a standby power, before data stored in said memory to be protected is damaged; and

wherein said memory protection unit has a switch on an I2C bus between SPD of said ~~protective memory to be protected, that is the~~ which comprises a DIMM<sub>1</sub>, and a memory controller, to cut off a connection between the SPD and the memory controller, in the above switched state.

9. (currently amended): The server as set forth in ~~Claim~~ claim 8, wherein said memory protection unit controls said SPD of said ~~protective memory to be protected~~ through said I2C bus.

10. (currently amended): The server as set forth in ~~Claim~~ claim 1, wherein said server ~~unit is~~ comprises a Network Attached Storage or a File Server.

11. (currently amended): A computer system for establishing mutual communication between a client terminal and a server through a network, wherein said server ~~has~~ comprises a

memory protection unit for protecting data stored in a volatile memory to be protected in the

event of a power failure, said memory protection unit comprising:

power monitoring means for detecting a power failure supplied to said ~~above protective~~  
memory to be protected; and

switch controlling means for switching ~~a control of~~ and ~~a power supply toward of~~ said  
~~protective memory to be protected~~; ~~in which~~

wherein when a failure is detected in ~~the~~ a power supplied to said protective memory to be  
protected, ~~the control toward of~~ said memory to be protected is switched to ~~a side of~~ said  
memory protection unit, and said power supply is switched to a standby power, before data  
stored in said protective memory to be protected ~~has some damaging effect~~ is damaged; and

wherein said server notifies said client of write completion of data at a time when data  
sent from said client has been written into said memory to be protected.

12. (currently amended): The computer system as set forth in ~~Claim~~ claim 11,  
wherein said switch controlling means finishes the switching, returns ~~the control toward of~~ said  
memory to be protected to a CPU of said server, and returns said power supply to an  
~~ordinal~~ ordinary one power supply, after ~~solution~~ resolution of the power failure.

13. (canceled).

14. (currently amended): ~~The computer system as set forth in Claim 11,~~ A computer  
system for establishing mutual communication between a client terminal and a server through a

network, wherein said server comprises a memory protection unit for protecting data stored in a volatile memory to be protected in the event of a power failure, said memory protection unit comprising:

power monitoring means for detecting a power failure supplied to said memory to be protected; and

switch controlling means for switching control of and a power supply of said memory to be protected;

wherein when a failure is detected in a power supplied to said memory to be protected, control of said memory to be protected is switched to said memory protection unit, and said power supply is switched to a standby power, before data stored in said memory to be protected is damaged;

wherein said server checks whether ~~said a~~ last termination is abnormal or normal, at ~~the a~~ power activation;

wherein, when said last termination is abnormal, said server instructs said memory protection unit to return said ~~protective-memory to be protected~~ after memories, other than said ~~protective-memory to be protected~~, are initialized at the activation, ~~when said last termination is abnormal, while;~~ and

wherein, when said last termination is normal, said server instructs said memory protection unit to return said ~~protective-memory to be protected~~ and thereafter initializes all ~~the~~ memories at the activation ~~when said last termination is normal.~~

15. (currently amended): ~~The computer system as set forth in Claim 11,~~ A computer system for establishing mutual communication between a client terminal and a server through a network, wherein said server comprises a memory protection unit for protecting data stored in a volatile memory to be protected in the event of a power failure, said memory protection unit comprising:

power monitoring means for detecting a power failure supplied to said memory to be protected; and

switch controlling means for switching control of and a power supply of said memory to be protected;

wherein when a failure is detected in a power supplied to said memory to be protected, control of said memory to be protected is switched to said memory protection unit, and said power supply is switched to a standby power, before data stored in said memory to be protected is damaged; and

wherein said switch controlling means switches said memory to be protected to a low power mode at a time of switching said power supply ~~toward~~ of said memory to the standby power.

16. (currently amended): The computer system as set forth in ~~Claim~~ claim 11, wherein said server ~~is comprises~~ a Network Attached Storage or a File Server.



17. (currently amended): A memory management method of a server for establishing communication upon receipt of access from a client terminal through a network, comprising the following steps of:

detecting a power failure supplied to ~~said above~~ a protective-memory to be protected; and  
switching ~~a control of~~ and a power supply toward said protective-memory to be protected; ~~in which~~

notifying said client of write completion of data at a time when data sent from said client has been written into said memory to be protected;

wherein when a failure is detected in ~~the~~ a power supplied to said ~~protective-memory to be protected~~, ~~the control toward~~ said memory to be protected is cut off from a CPU, and said power supply is switched to a standby power, before said ~~protective-memory to be protected~~ has some damaging effect is damaged, so as to protect ~~the data stored in said protective-volatile memory to be protected~~, in the event of a power failure.

18. (currently amended): The memory management method as set forth in ~~Claim~~ claim 17, further comprising ~~a step of~~ finishing the switching, returning ~~the control toward~~ said memory to be protected to a CPU, and returning said power supply to an ~~ordinary~~ one power supply, after ~~solution~~ resolution of the power failure.

19. (canceled).

20. (currently amended): ~~The memory management method as set forth in Claim 17,~~  
~~further comprising:~~ A memory management method of a server for establishing communication  
upon receipt of access from a client terminal through a network, comprising:

detecting a power failure supplied to a memory to be protected;

switching control of and a power supply of said memory to be protected;

~~a step of checking whether said a last termination is abnormal or normal, at the a power~~  
activation;

~~a step of returning said protective-memory to be protected~~ after initializing memories  
other than said ~~protective-memory to be protected~~ at the activation; when said last termination is  
abnormal; and

~~a step of returning said protective-memory to be protected~~ and thereafter initializing all  
~~the memories~~ at the activation when said last termination is normal;

wherein when a failure is detected in a power supplied to said memory to be protected,  
control of said memory to be protected is cut off from a CPU, and said power supply is switched  
to a standby power, before said memory to be protected is damaged, so as to protect data stored  
in said memory to be protected, in the event of a power failure.

21. (currently amended): ~~The memory management method as set forth in Claim 17,~~  
~~further comprising~~ A memory management method of a server for establishing communication  
upon receipt of access from a client terminal through a network, comprising:

detecting a power failure supplied to a memory to be protected;

switching control of and a power supply of said memory to be protected; and

~~a step of switching said memory to be protected~~ to a low power mode at a time of switching said power supply ~~toward~~ of said memory to the standby power;

wherein when a failure is detected in a power supplied to said memory to be protected, control of said memory to be protected is cut off from a CPU, and said power supply is switched to a standby power, before said memory to be protected is damaged, so as to protect data stored in said memory to be protected, in the event of a power failure.

22. (currently amended): ~~The memory management method as set forth in Claim 17,~~  
A memory management method of a server for establishing communication upon receipt of access from a client terminal through a network, comprising:

detecting a power failure supplied to a memory to be protected;  
switching control of and a power supply of said memory to be protected; and  
~~further comprising a step of performing backup processing on the data stored in said~~  
memory, in response to a user's operation, after the switching;

wherein when a failure is detected in a power supplied to said memory to be protected, control of said memory to be protected is cut off from a CPU, and said power supply is switched to a standby power, before said memory to be protected is damaged, so as to protect data stored in said memory to be protected, in the event of a power failure.

23. (currently amended): The memory management method as set forth in Claim 17,  
wherein ~~said protective-memory to be protected~~ is comprises a SDRAM or a DIMM.

24. (currently amended): ~~The memory management method as set forth in Claim 17,~~  
A memory management method of a server for establishing communication upon receipt of  
access from a client terminal through a network, comprising:

detecting a power failure supplied to a memory to be protected;

switching control of and a power supply of said memory to be protected; and

~~further comprising a step of,~~ with a switch provided on an I2C bus between SPD of said  
~~protective-memory to be protected that is the,~~ which comprises a DIMM<sub>1</sub> and a memory  
controller, cutting off a connection between the SPD and the memory controller, in the switched  
state;-

wherein when a failure is detected in a power supplied to said memory to be protected,  
control of said memory to be protected is cut off from a CPU, and said power supply is switched  
to a standby power, before said memory to be protected is damaged, so as to protect data stored  
in said memory to be protected, in the event of a power failure.

25. (currently amended): The memory management method as set forth in ~~Claim~~  
claim 24, further comprising ~~a step of controlling said SPD of said protective-memory to be~~  
protected through said I2C bus.

26. (currently amended): A memory management program of a server for  
establishing communication upon receipt of access from a client terminal through a network,  
comprising ~~the following functions of:~~

detecting a power failure supplied to a ~~protective-memory to be protected;~~ and

switching a control of and a power supply toward of said protective memory to be protected, in which and

notifying said client of write completion of data at a time when data sent from said client has been written into said memory to be protected;

wherein when a failure is detected in ~~the~~ a power supplied to said ~~protective~~ memory to be protected, the control ~~toward of~~ said memory to be protected is cut off from a CPU, and said power supply is switched to a standby power, before said ~~protective~~ memory to be protected ~~has some damaging effect~~ is damaged, so as to protect ~~the~~ data stored in said ~~protective~~ volatile memory to be protected, in the event of a power failure.

27. (currently amended): The memory management program as set forth in ~~Claim~~ claim 26, further comprising ~~a function of~~ finishing the switching, returning ~~the control toward of~~ said memory to be protected to said CPU, and returning said power supply to an ~~ordinal~~ ordinary ~~one~~ power supply, after ~~solution~~ resolution of the power failure.

28. (canceled).

29. (currently amended): ~~The memory management program as set forth in claim 26, further comprising:~~ A memory management program of a server for establishing communication upon receipt of access from a client terminal through a network, comprising:

detecting a power failure supplied to a memory to be protected;

switching control of and a power supply of said memory to be protected;

~~a function of~~ checking whether ~~said~~ last termination is abnormal or normal, at the power activation;

~~a function of~~ returning said ~~protective-memory~~ to be protected after initializing memories other than said ~~protective-memory~~ to be protected at the activation; when said last termination is abnormal; and

~~a function of~~ returning said ~~protective-memory~~ to be protected and thereafter initializing all ~~the~~ memories at the activation when said last termination is normal;

wherein when a failure is detected in a power supplied to said memory to be protected, the control of said memory to be protected is cut off from a CPU, and said power supply is switched to a standby power, before said memory to be protected is damaged, so as to protect data stored in said memory to be protected in the event of a power failure.